

IMPLEMENTING PM-2.5 NSR IN AIR PERMITS

Rules and Applicability - Ketan Bhandutia

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Federal Actions

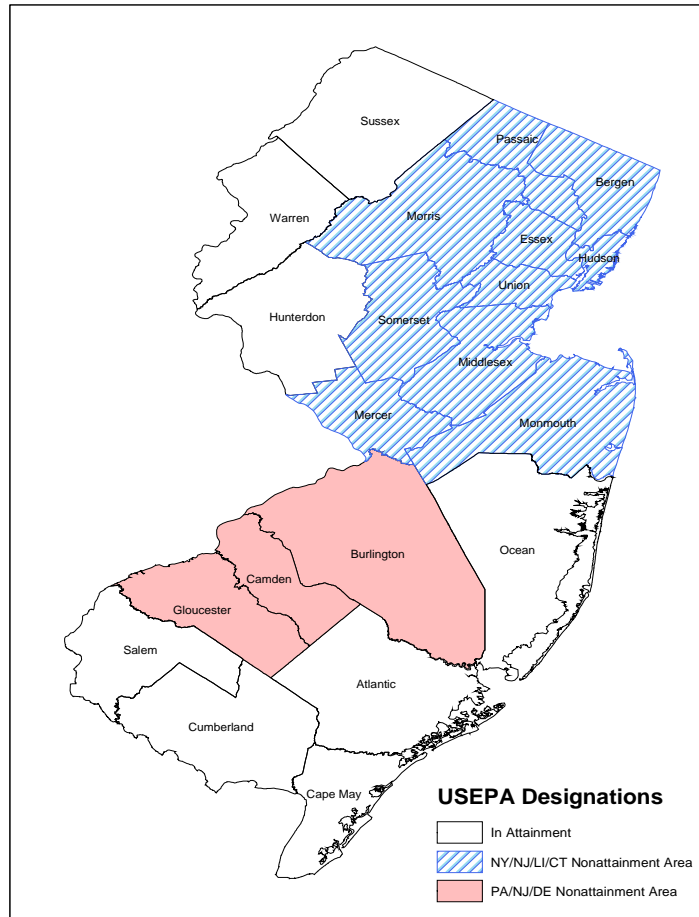
- EPA established PM-2.5 NAAQS in 12/2006
 - 35 $\mu\text{g}/\text{m}^3$ (Daily) and
 - 15 $\mu\text{g}/\text{m}^3$ (Annual)
- PM-2.5 NSR Rules
(5/16/2008 FR)
- PM-2.5 Increments, Significant Impact Levels (SIL)
and Significant Monitoring Concentration (SMC)
(10/20/2010 FR)
- PM-2.5 Test methods
(12/21/2010 FR)

NJ Area Designation and NSR Rule Applicability

- EPA designated NJ's 8 counties in "Attainment" area

In NJ's 8 "Attainment" counties, the final rules apply through PSD delegation

USEPA Designations of Nonattainment Areas for PM 2.5 in New Jersey



Date: December 21, 2004
Source: <http://www.epa.gov/pmdesignations/finaltable.htm>
Map: epa_nj

- EPA designated NJ's 13 counties in "Non-Attainment" area

* The Federal rules apply under 40 CFR Part 51, Appendix S until New Jersey revise Subchapter-18, 8 and 22 and submit to EPA as a SIP revision

5/16/08 PM-2.5 NSR Rule

Summary of Requirements

*** PM2.5 Precursors**

- SO₂ and NO_x (“Presumed in”)
- Under 40 CR 52.21(PSD) >>> SO₂ and NO_x
- Under 40 CFR 51, Appendix S (NNSR) >>> SO₂ only

*** Major Source Thresholds**

- 100 TPY/250 TPY (PSD)
- 100 TPY (NNSR)

*** Significant Emissions Rates**

- 10 TPY for PM-2.5
- 40 TPY for Precursors (SO₂ & NO_x)

5/16/08 PM-2.5 NSR Rule

Summary of Requirements (Contd.)

* **Condensable PM**

- The 5/16/08 rule specified Transition Period (TP) to validate CPM test methods. Condensibles were exempted during TP.
- TP ended on 12/31/2010
- Effective 1/1/2011, condensibles must be included in applicability and modeling

• **Offsets**

- Inter-pollutant trading allowed for offsets (not for netting)
(Reduction in SO₂ to offset PM_{2.5} increases)
- PM-2.5:PM-2.5 @ **1:1**
- SO₂:PM-2.5 @ **40:1**
- Different ratios optional with public input

PSD REQUIREMENTS for PM-2.5

(Review Applications in 8 Attainment Counties under PSD Delegation)

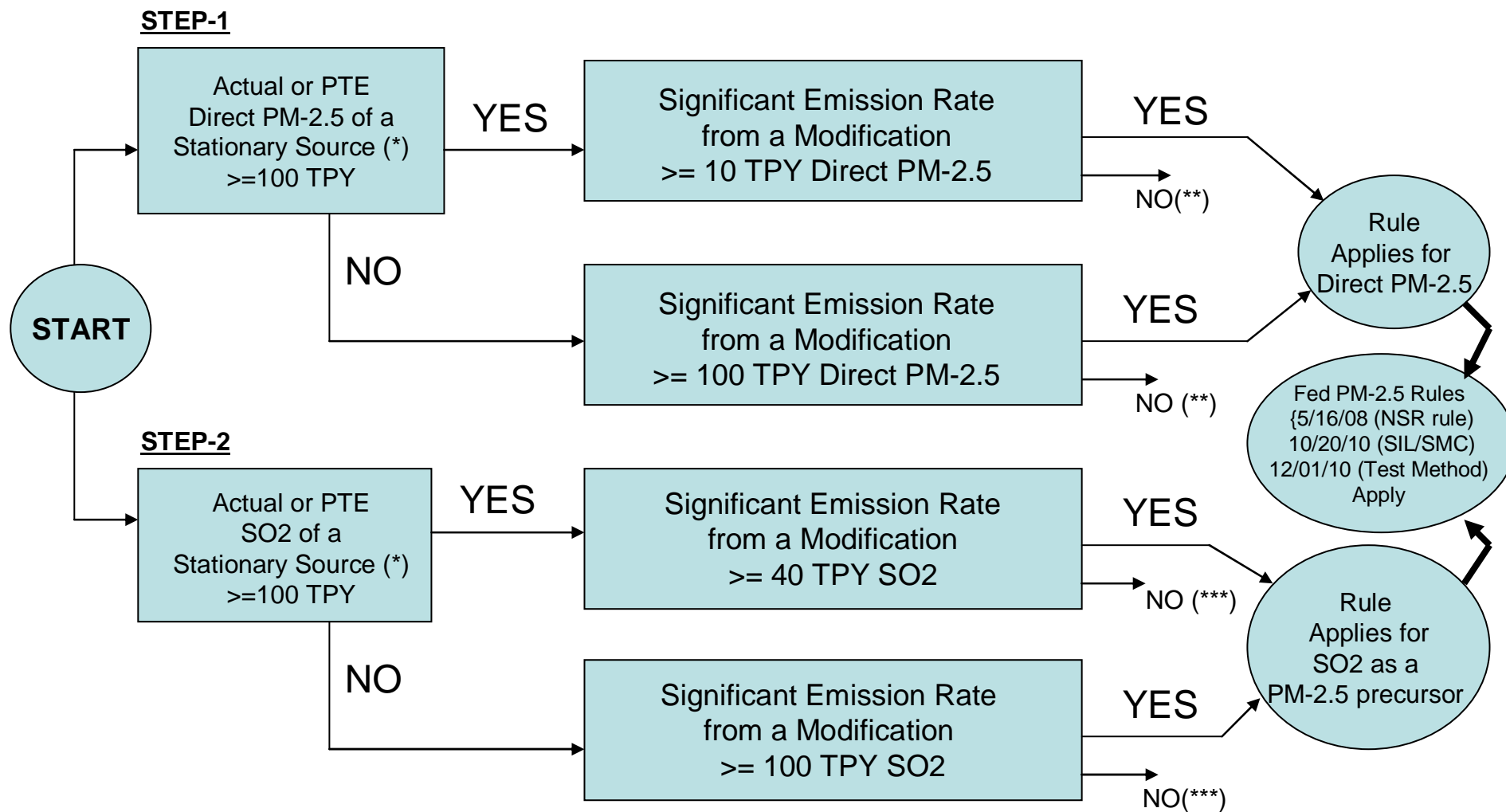
	AFTER 7/15/08
Major Source Triggers	100 TPY/250 TPY of Direct PM-2.5 (Include condensibles)
Modification Triggers	10 TPY (Direct PM-2.5) (Include condensibles) 40 TPY (SO2 and NOx)
BACT	Direct PM-2.5, (SO2 and NOx as applicable)
Increments, SILs and SMCs	Use EPA's 10/20/2010 Final Rule
Ambient Air Quality Analysis	Include condensibles, Consider precursors (SO2 and NOx impacts)
Preconstruction Monitoring	Required, but exempt on a case-by-case basis using SMC

NNSR REQUIREMENTS for PM-2.5

(Review Applications in 13 Nonattainment Counties under Appendix S)

		After 7/15/08
Applicability		100 TPY (Direct PM2.5)
Modification Triggers		10 TPY (Direct PM-2.5) 40 TPY (SO2)
Netting		Follow Appendix S (10-year look-back, Actual to Future Actual/Potential Applicability Test)
Condensables		Include after 1/1/2011

CHART-1 **APPLICABILITY OF FEDERAL PM-2.5 NON-ATTAINMENT NSR RULE** **UNDER APPENDIX S TO THE EXISTING SOURCES** **(Follow Step 1 and Step 2)**



(*): See the definition on Slide 2 below

(**): Rule does not apply for Direct PM-2.5. Go to Step-2

(***): Rule does not apply for SO₂ as a PM-2.5 Precursor

Verbally approved by EPA Region II

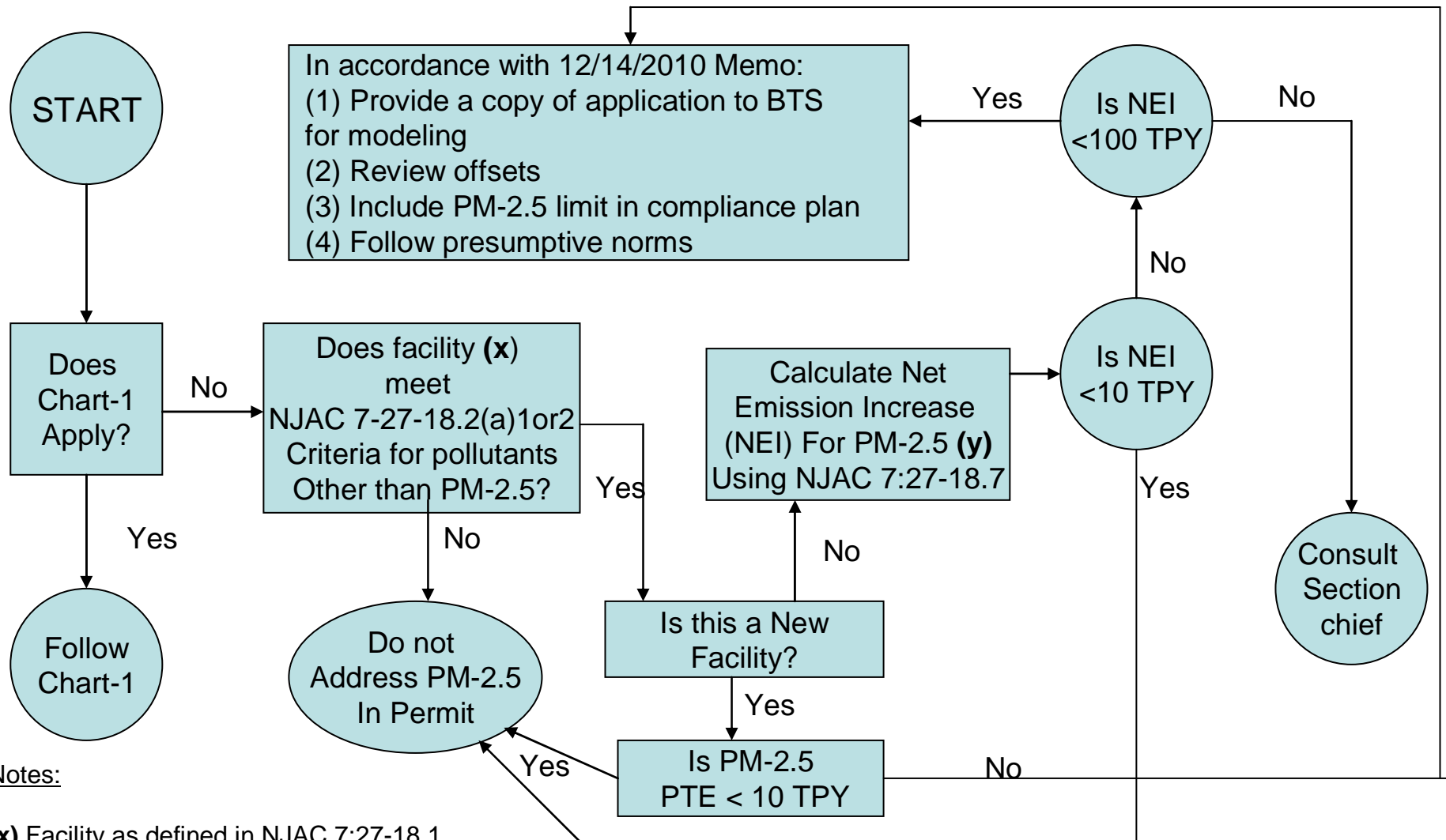
Sources emitting 10 to 100 TPY

(12/14/2011 Memo from John Preczewski, AD)

- Direct PM-2.5 emissions only. Precursors such as SO₂ should not be considered
- Direct PM-2.5 should include condensibles
- Address offsets (1:1), as applicable
- Establish PM-2.5 limits and prepare compliance plans
- Testing of PM-2.5 using presumptive norms for PM-10 testing

CHART-2

APPLICABILITY OF 12/14/2010 MEMO



Notes:

(x) Facility as defined in NJAC 7:27-18.1

(y) Include condensable to the direct PM-2.5 emissions. However, do not consider precursors of PM-2.5 such as SO₂

NJDEP IMPLEMENTATION PLAN FOR NJ'S PM-2.5 NON-ATTAINMENT NSR

- EPA rules allow three years to revise NJ's NNSR rules and SIP
- Revise Sub-18, 22 and 8 to include PM-2.5 Requirements
- Continue reviewing Non-Attainment NSR Requirements for PM-2.5 under Appendix S
- Continue using our Interim Permitting and Modeling Procedures (12/14/2011 Memo) for sources emitting <100 TPY

Modeling for Sources Emitting Less than 100 TPY

(12/14/2010 Memo)

Alan Dresser

Stack Emission Testing of PM-2.5

(12/21/2010 Final rule)

Mike Klein